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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,446	02/11/2004	Srinivasa H. Raghavan	D472A	3697

7590 02/06/2007  
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EXAMINER
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TAYONG, HELENE E

ART UNIT	PAPER NUMBER
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2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/776,446

Applicant(s)

RAGHAVAN ET AL.

Examiner

Helene Tayong

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Raghavan et al (6,075,810).

(1) Regarding to claim 1,

see figures 3A, 3B, 5A, and col. 8, line 52 to col. 9, line 52, col. 10, line 56 to col. 11, line 20, Raghavan et al discloses a system (see figure 3A) for communicating a first formatted data stream (outputted from (32)) and a second formatted data stream (outputted from (102)) through a dual spectrum signal (comprising (110a)) over a communication bandwidth, the system comprising:

a first code formatter (36) for formatting a first spreading code (outputted from (34)) into a first formatted code (col. 9, line 18-19)

a first spreader (38) for spectrum spreading the first formatted data stream by the first formatted code into a first spread spectrum signal (17a), ( col. 10, lines 1-4)

a second code formatter (106) for formatting a second spreading code into a second formatted code ( col. 9, lines 18-20),

a second spreader (108) for spectrum spreading the second formatted data stream by the second formatted code into a second spread spectrum signal ( col.10, lines 1-2), and

a modulator (comprising (126 and 128 in fig. 4A)) for combining and communicating the first spread

spectrum signal and the second spread spectrum signal into the dual spectrum signal (comprising (110a)) (col. 9, lines 2-4), wherein the first spread spectrum signal having a first spectrum (90) over the communication bandwidth and the second spread spectrum signal having a second spectrum (132) over the communication bandwidth (see figure 5A) (col. 11, lines 14-16), wherein,

the first code formatter is an NRZ code formatter (see 36 of fig 3A), and the second code formatter is a staggered Manchester code formatter see (106) of fig 3A, col 8, lines 65-66).

(2) Regarding to claim 2, the first spectrum is a nonsplit spectrum with a peak within the communication bandwidth, and the second spectrum is a split spectrum with a null within the communication bandwidth (see figure 5A, and col. 10, line 56 to col. 11, line 20).

(3) Regarding to claim 3, the system is a code division multiple access system (see col. 9, lines 14-22).

(4) Regarding to claim 4, a first receiver (see figure 3B and col. 3, lines 11-41, col. 9, lines 23-52) for spread spectrum despread the first spread spectrum signal and the second spread spectrum signal, the first receiver comprising: a first replica code formatter (60) for formatting a first replica spreading code (outputted

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from (60) into a first replica formatted code, the first replica spreading code being a replica of the first spreading code (col. 10, lines 34-35), and

a first despreader (54) for spectrum despreading the first spread spectrum signal by the first replica formatted code into a first despread signal (col. 10, lines 37-38).

(5) Regarding to claim 5,

a second receiver (see figure 3B, and col. 9, lines 23-52) for spread spectrum despreading the second spread spectrum signal and the second spread spectrum signal, the second receiver comprising:

a second replica code formatter (112) for formatting a second replica spreading code into a second replica formatted code, the second replica spreading code being a replica of the second spreading code (col. 10, lines 35-36), and

a second despreader (113) for spectrum despreading the second spread spectrum signal into a second despread signal (col. 10, lines 37-38).

(6) Regarding to claim 6,

a first receiver (60, 54, 72, 76) and a second receiver (112, 113, 115, 117) (see figure 3B and col. 3, lines 11-41, col. 9, lines 23-52),

wherein the first receiver comprises:

a first replica code formatter (60) for formatting a first replica spreading code into a first replica formatted code, the first replica spreading code being a replica of the first spreading code, a first despreader (54) for spectrum despreading the first spread spectrum signal into a first despread signal, and a detector (76) for detecting the first data stream for the first despread signal;

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and the second receiver comprises:

a second replica code formatter (112) for formatting a second replica spreading code into a second replica formatted code, the second replica spreading code being a replica of the second spreading code ( col. 10, lines 35-36), and

a second desreader (113) for spectrum desreading the second spread spectrum signal by the second replica formatted code into a second desread signal Col. 10, lines 36-37).

(7) Regarding to claim 7,

a first replica code formatter (60) for formatting a first replica spreading code into a first replica formatted code, the first replica spreading code being a replica of the first spreading code, a first desreader (54) for spectrum desreading the first spread spectrum signal into a first desread signal,

a second replica code formatter (112) for formatting a second replica spreading code into a second replica formatted code, the second replica spreading code being a replica of the second spreading code ( col. 10, lines 35-36), and

a second desreader (113) for spectrum desreading the second spread spectrum signal into a second desread signal ( col. 10, lines 36-37), wherein

, the first code formatter is an NRZ formatter, the first spread spectrum signal is a nonsplit spectrum signal, the first spectrum is a nonsplit spectrum having a center peak, the second code formatter is a Manchester formatter ( also known as Biphase -L), the second spread spectrum signal is a split spectrum signal, the second spectrum is a split spectrum having a center null, the first replica code formatter is an NRZ formatter, and

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the second replica code formatter is a Manchester code formatter (also known as Biphase -L) (see figures 3B, 5A, and col. 9, lines 22-52, col. 10, line 56 to col. 11, line 20).

(8) Regarding to claim 8,

a first replica code formatter (60) (see figure 3B) for formatting a first replica spreading code into a first replica formatted code, the first replica spreading code being a replica of the first spreading code,

a first despreader (54) (see figure 3B) for spectrum despreading the first spread spectrum signal into a first despread signal,

a second replica code formatter (112) (see figure 3B) for formatting a second replica spreading code into a second replica formatted code, the second replica spreading code being a replica of the second spreading code, and

a second despreader (113) (see figure 3B) for spectrum despreading the second spread spectrum signal into a second despread signal,

wherein, the first code formatter is in a transmitter (see figure 3A), the first spread spectrum signal is a nonsplit spectrum signal (see (90) of figure 5A), the second code formatter is in the transmitter (see figure 3A), the second spread spectrum signal is a split spectrum signal (see (132) of figure 5A), the first replica code formatter is in a first receiver (60, 54, 72, 76), the second replica code formatter is in a second receiver (112, 113, 115, 117), the first formatted data stream is communicated between the transmitter and the first receiver, and the second formatted data stream is

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communicated between the transmitter and the second receiver (see figures 3A, 3B, and col. 8, line 52 to col. 9, line 52, col. 10, line 56 to col. 11, line 20).

(9) Regarding to claim 9,

a first replica code formatter (60) (see figure 3B) for formatting a first replica spreading code into a first replica formatted code, the first replica spreading code being a replica of the first spreading code,

a first despreader (54) (see figure 3B) for spectrum despreading the first spread spectrum signal into a first despread signal, a second replica code formatter (112) (see figure 3B) for formatting a second replica

spreading code into a second replica formatted code, the second replica spreading code being a replica of the second spreading code, and

a second despreader (113) (see figure 3B) for spectrum despreading the second spread spectrum signal into a second despread signal,

wherein, the first code formatter is an NRZ formatter (see (36) of figure 3A), the first spread spectrum signal is a nonsplit spectrum signal (see (90) of figure 5A), the second code formatter is a Manchester formatter (also known as Biphase -L) (see (106) of figure 3A), the second spread spectrum signal is a split spectrum signal (see (132) of figure 5A), the first replica code formatter is an NRZ formatter (see (60) of figure 3B), the second replica code formatter is a Manchester code formatter (also known as Biphase -L) (see (112) of figure 3B), the first code formatter and the second code formatter are disposed in a transmitter (see figure 3A).

(10) Regarding to claim 10,



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the staggered Manchester format is a staggered Biphase-L format (Manchester format also known as biphase -L(106 of fig. 3A, col. 8, lines 65-66).

(11) Regarding to claim 11,

the staggered Manchester (106, of fig. 3A) format is a staggered binary offset carrier format (Interpreted as generalized Manchester code format,(106, of fig. 3A, (106 of fig. 3A, col. 8, lines 65-66).

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2,4-10 of US Patent No. 7139302 B2.

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Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-2,4-10 of US Patent No. 7139302 B2. encompass the limitations of claims 1-9 of the instant application, respectively.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Raghavan et al. ( US patent number 6075810) discloses NRZ and Biphase-formatted Hexaphase modulated GPS Transmission method.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Tayong whose telephone number is 571-270-1675. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lui Shuwang can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helene Tayong

1/31/07



**SHUWANG LIU**  
**SUPERVISORY PATENT EXAMINER**